

Application No. 10/790,403

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TC Art Unit: 2822

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IN THE SPECIFICATION

Please replace the paragraph beginning at line 35 on page 3 and ending at line 20 on page 4 with the following:

A preferred method for the fabrication of the buried layer 14 of Fig. 2 is illustrated with respect to Figs. 3 - 13. The photodetector application is then illustrated in Figs. 11-24. In Fig. 3 a wafer of silicon 20 has an oxide layer 24[[22]] thereon. Dimensions are given in the figures for purposes of an example for a photodetector selected to respond selectively to light distributed around 850 nm (+/- nearly 100 nm), but the invention is not limited to any particular wavelength. In this case the silicon dioxide is 437 nm in depth. Hydrogen atoms are implanted through the oxide to form a thin layer 25 at an exemplary depth of 611 nm with a dosage of, for example only, $2 \times 10^{16} \text{cm}^{-2}$ to $1 \times 10^{17} \text{cm}^{-2}$ and thus are placed in the silicon below the oxide as shown in Fig. 4a. A second silicon body 26 is provided in Fig. 4b and the oxide layer 24[[22]] is thermally bonded onto the top of this layer 26. The thermal bonding, typically at 600 degrees C, cleaves the boundary between the hydrogen and no hydrogen containing silicon, leaving a 174 nm silicon layer 28 on top of the oxide 24 as shown in Fig. 5. Final bonding at 1000 degrees C is then performed. The top silicon layer 28 is mechanically polished to achieve the result of Fig. 6.